User manual

SETUP & OPERATION

lympha Press® Plus

Model 1033-AL
Model 1033-EL

Fully Programmable System

April 2008

L98101B0

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1. UNPACKING

Carton (See Note Below)

Lympha Press Plus

CD Rom

Air Hose Bundle

Double Female Plugs

12 Prong Plug

Power Cord

PC Communication Cable

NOTE:

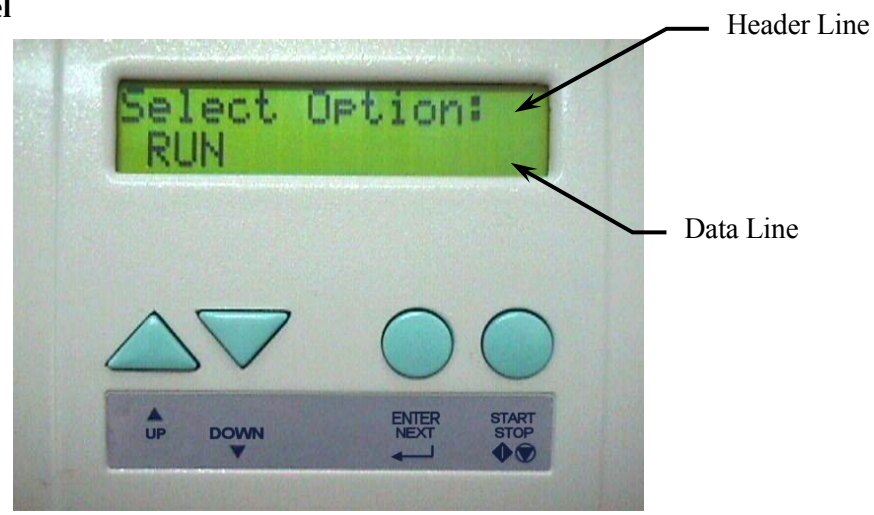
Save the original carton in case the device must be shipped or moved to a new location. Mego Afek AC Ltd. will not be responsible for damage done to device due to incorrect repacking.

2. INTRODUCTION

The **lympha Press Plus** ® is a fully programmable sequential compression therapy device with compression garments for medical use only. It is designed to offer a vast array of treatment options in one device, so that each patient is provided with a combination of unique therapy cycles to optimally treat their individual conditions.
In order to best utilize this compression equipment, we recommend that you read the operation instructions carefully prior to using it. Strict adherence to your physician's instructions and regular treatment will greatly contribute to life quality.
Should you have any questions or require further information, please do not hesitate to contact your local dealer. You can visit our website at www.lympha-press.com for details on local dealers, and patient education.

Figure 1 - Lympha Press Plus®

Figure 2 - Control Panel



The control panel.
Display window shows the Header Line describing your present location within the program. The Data Line is where you choose your setting. All data is entered by means of the four keys on the panel. The **UP** and **DOWN** keys scroll throughout the setting options. The **ENTER/NEXT** key inputs your setting and moves on to the next programming step. The **START/STOP** key activates the device, initiating and halting the treatment cycle.

Figure 3 - Fuse Insertion

Figure 4 - Power cord and pc communication cord

NOTE:
Use of the **lympha Press® Plus** is not recommended in the following conditions:

2.1 Contraindications

- In the presence of any pain or numbness.
- Severe arteriosclerosis or other ischemic vascular diseases.
- Unbalanced cardiac insufficiency.
- Known or suspected deep vein thrombosis or thrombophlebitis.
- Gangrene.
- Dermatitis.
- Untreated or infected wounds.
- Severe inflammation of the treated limb.
- Recent skin grafts.

NOTE:
Due to movement of fluids in the body when using this device, be careful with patients having heart disease. Using high pressure is **not** recommended for patients having peripheral occlusion disease.

Warning:
Federal law (U.S.A.) restricts this device to sale by, or on the order of, a physician.

2.2 Indications

Lymphedema	Lipoedema
Primary Lymphedema, ie	Venous insufficiency
Congenital (Milroy's Disease)	Varicose Veins
Proximal Obliteration	Leg Ulcers
Distal Obliteration	Promotion of Wound Recovery
Secondary Lymphedema, i.e.	Postoperative Venous Ligation or Stripping
Post Mastectomy	Sport Injuries
Groin Dissection	Post Traumatic Edema
Chronic Edema of Venous Origin	Lymphatic Filariasis

3. GENERAL DESCRIPTION

3.1 Cycle differences & use

The **Total Treatment** given to the patient by the **Lympha Press Plus** can include up to six program **Steps**. Each step runs a specific **Cycle.** The combination of cycles for a treatment program, can provide maximum effect with a good feeling for the patient.

The cycles are**: Lympha, Gradient12, Wave, Ballancer, and Pre-Therapy**.

Your device comes set up with a typical program as follows:

Pre-Therapy: To open the lymph junctions prior to starting main treatment.

Lympha: The main treatment.

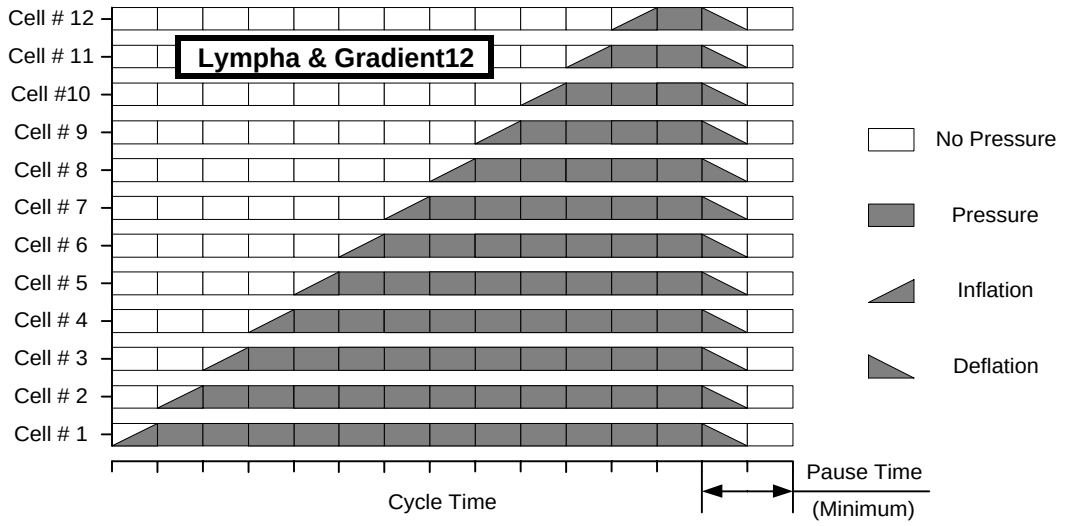
Ballancer: To give the patient a smooth massage, in order to release stresses from the body.

NOTE:
In order to make your own treatment program, see para.7 Programming the device.

I. **Lympha** – A cycle that applies a sequential pressure along the limb, from distal to proximal. This cycle is for the treatment of Lymphedema.

II. **Gradient12 -** A gradient cycle similar to the **Lympha** cycle used for the same purpose, but the user can set the pressure for each cell in the garment. The device ensures a positive gradient of pressure from distal to proximal. Minimum gradient is 1mmHg.

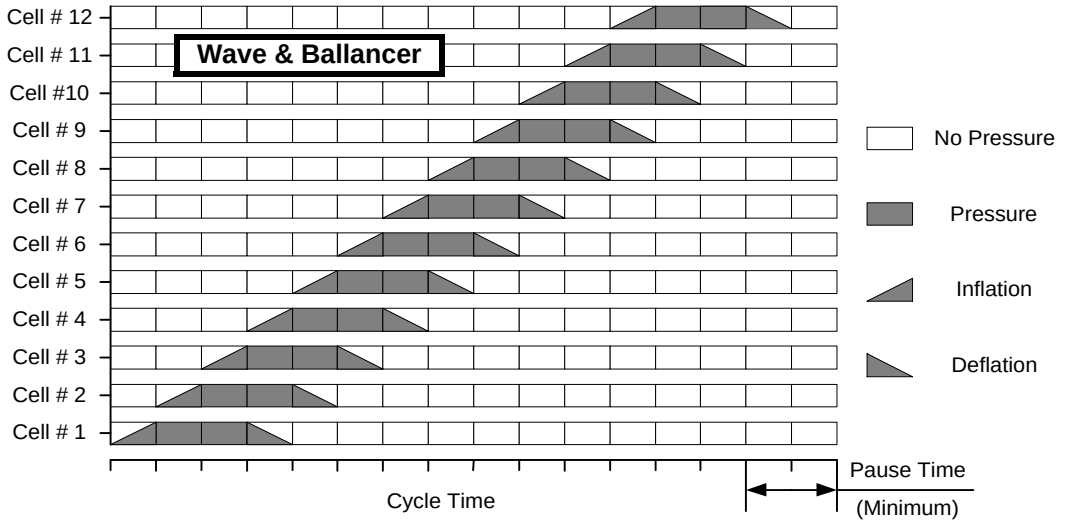
Figure 5 -Lympha and Gradient12 air cycles



III. **Wave** – A smooth peristaltic pressure around the limb, which flows upward from distal to proximal This cycle is recommended for treating venous disorders, mild non-chronic edemas, post operative, post traumatic, geriatric edemas, leg ulcers, etc, as well as cases of Lymphedema and focal discomfort due to lesions or scar tissue. The cycle progress derives from pressure level, i.e. the next cell of the garment will inflate only after the previous one has gained the requested pressure.

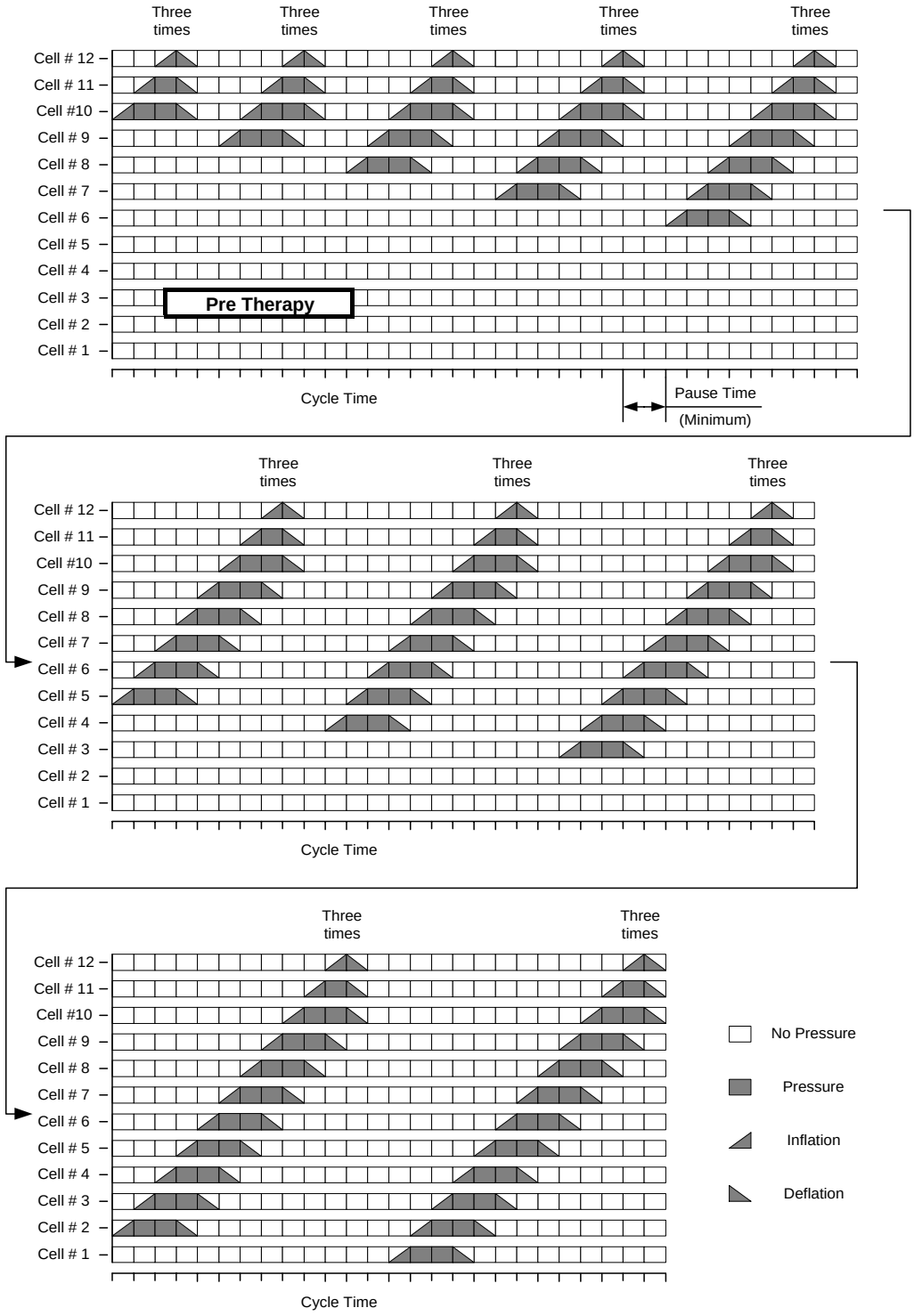
IV. **Ballancer** – The cycle works like the **Wave**, but is based on speed and not on pressure. Each cell will inflate within a fixed time depending on the requested **speed.** The regular, wave like motion of the Balancer cycle is very relaxing and is recommended for the improvement of circulation and lymphatic drainage.

Figure 6 - Wave and Ballancer air cycles



V. **Pre-therapy** – A special cycle that helps empty the proximal lymphatics prior to starting the standard distal to proximal treatment cycles. Opening these junctions assists the lymph liquids to flow upward on the treated limb. The cycle works like the **Wave,** starts close to the lymph junction (the upper side of the limb) and flows upward. Then it starts again at the lower point and flows upward. The cycle continues that way, until it starts from the most distal point of the limb, flows upward until reaching the proximal point and then stops.

Figure 7 - Pre-therapy air cycles



3.2 Safety features

3.2.1. Safety valves

The line of the pressure that comes from the compressor is protected by a mechanical **Safety valve** that doesn't let the pressure in the device to rise over it's value. A sound like a low horn will tell you that this Safety Valve is working, allowing the extra air out through the valve.

3.2.2. Normally opened valves system

Normally Open Valves System means that in case of **electric break or power failure,** all valves will open, letting out the air pressure from all the cells of your garments and allowing the garments to passively deflate.

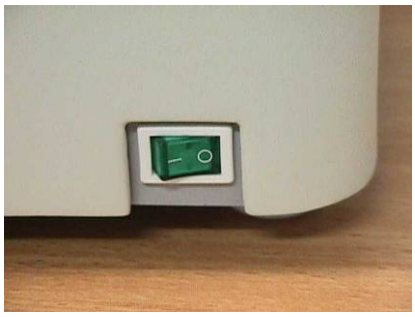
3.2.3. "Watch Dog"

In case of any malfunction in the program **Software**, an electric safety device called "Watch Dog" will identify the problem and stop the treatment immediately, allowing the air pressure to deflate from the garment. The message **"ChkSum Err"** will be displayed.

3.2.4. Emergency shut down

In case of emergency, or if the patient experiences discomfort and feels the need to cease treatment immediately, just shut down the **ON/OFF** switch. All valves will open, allowing the air pressure out and deflating all the cells of your garment.

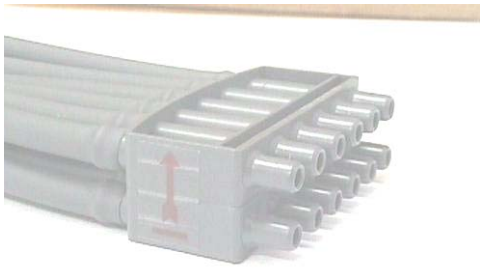
Figure 8 - Off/On Switch



3.2.5. Single Connection Option

The 12-prong pin air plug is shaped asymmetrically and features a positioning mark. This is in order to ensure correct connection to the device. The plug pins enable easy connecting/disconnecting. In cases where the operation must be discontinued, the plug can be pulled out easily to deflate the existing pressure in the air compartments

Figure 9 - 12 Prong plug with red arrow (positioning mark)



3.2.6. Air Compartment Identification Numbers

Identification numbers are affixed to the air hose tips to enable the operator to ascertain the proper inflation order.

Figure 10 - I.D. numbers at air hose tips

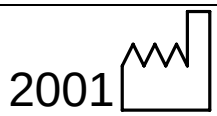
3.2.7. Easy, safe garment removal

Each garment is fastened with either Velcro straps or zippers to allow easy, safe removal.

3.2.8. Overload protection fuse

The device is equipped with two overload protection fuses to protect in the event of a short circuit (See Figure 3).

3.3 Symbols on the Device

	ATTENTION! READ INSTRUCTIONS CAREFULLY BEFORE USE Located on: Back of Device
	LEVEL OF PROTECTION - TYPE BF EQUIPMENT Located on: Back of Device
	DATE OF MANUFACTURE Located on: Bottom of Device
	For CE market - CE MARK SHOWING COMPLIANCE WITH EC DIRECTIVE 93/42/EEC. (MEDICAL DEVICE DIRECTIVE) Located on: Back of Device
	For North America market - Classified by Underwriters Laboratories Inc. with respect to electric shock, fire and mechanical hazards only in accordance with UL 60601-1 and CAN/CSA C22.2 No. 601.1 Located on: Back of Device

3.4 Dimensions

	Lympha Press® Plus
Height	140 mm
Length	410 mm
Width	340 mm
Net Wt.	10 Kg

3.5 Lympha Press® Plus specifications

Cat. No.	Model	Pressure range	Voltage	Amp.	Fuses
L10002B1	1033-AL	20-120	115	0.7	2x1A
L10002B3	1033-EL	20-120	230	0.5	2x1A

4. COMPONENTS

4.1 Pressure unit

The devices are powered by electricity provided by any household wall outlet. They supply compressed air in fixed cycles at regulated pressure. The power unit is able to operate simultaneously two compression garments of up to 12 air compartments each.

4.2 Hose bundle assembly

The hose assembly transfers the compressed air from the power unit to the different compression garments. It includes 12 numbered hoses, a connector that attaches to the corresponding receptacle of the power unit, and 12 numbered end fittings that attach to the garment.

4.3 12 prong plug

Plug used to seal off the second, unused outlet of the pressure unit

4.4 Double female plug

Plugs used to seal off unused hoses. Each plug is capable of sealing off two hoses.

4.5 Power cord

Any standard power cord can be used as long as it is compatible to the electrical outlet in the user's country.

4.6 PC communication cord

Used to send the program from your PC to the Lympha Press® Plus.

4.7 CD Rom

Used to install the communication program and this operation manual into your computer.

4.8 Compression Garments

4.8.1. Sleeve for lower extremities (Velcro type fastener)

Designed to provide a treatment to the legs from the foot until the groin. Includes up to 12 air compartments. These sleeves have three-point adjustments for an excellent fit and are available in a wide range of sizes. Maximum treatment pressure with Velcro sleeves is 80 mmHg.

4.8.2. Sleeve for upper and lower extremities (Zipper type fastener)

Designed to provide treatment for arms or legs. Three different zippers allow easy adjustment of the sleeve circumference. The sleeves are available in a wide range of sizes.

4.8.3. Expanders for zippered sleeves

Designed to increase the circumference of the zipper-type sleeves by 60 mm.

4.8.4. Boot

Sleeve for treatment of the foot, with up to two air compartments. Intended for use with the zipper sleeve for leg treatment Available in a variety of sizes.

4.8.5. Waist Sleeve

Garment containing eight air compartments. Designed for use in the waist area, in conjunction with leg treatments. Fastened to the waist with adjustable buckles. Available in two sizes.

4.8.6. Overlapping pants & expanders

Designed to provide treatment to the lower extremities (from foot up to waist). Includes 12 air compartments in each leg. Expanders are available for easy size adjustment designed to increase the circumference of the pants in the waist and at the bottom cuff. The expanders are easy to use. Just attach the zippers on either side of expander to the zippers on the pants. Two types are available: right and left.

NOTE:

Since the cells in the pants are not individually replaceable (as in the other compression garments), avoid contact with pins, needles and other sharp objects. If one of the cells is damaged the whole garment must be replaced.

Figure 11 - Treatment with overlapping pants

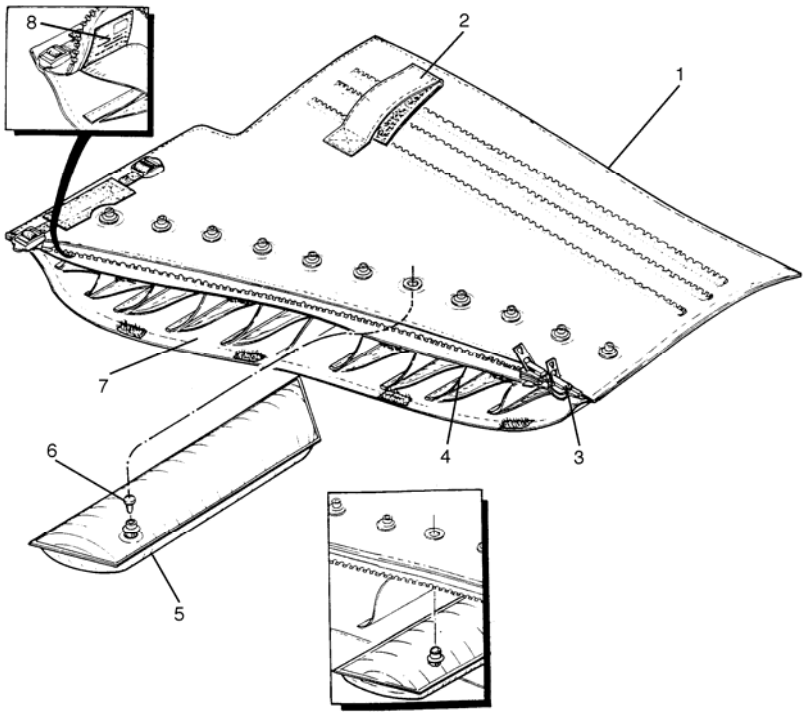
4.8.7. Cotton inner sleeves

Cotton tubular inner sleeve to be worn under the treatment sleeve, for hygienic reasons. The cotton inner sleeve is a one piece tubular cotton garment, similar to an open ended stocking, that fits over the limb. Four sizes are available from your Lympha Press dealer.

4.8.8. Air compartments

Located inside the compression garment. The cyclical inflation and deflation of the air compartments creates the massage/drainage of the treated body part. The air compartments in most compartments can be removed, allowing replacement when necessary. Each garment contains up to 12 air compartments. The compartments are numbered to enable re-order of a specific compartment from the manufacturer, if necessary.

Figure 12 - view of How to un attach cells in zipper sleeve



5. PREPARATION

5.1 Applying a cotton inner sleeve

Cover the limb with a cotton inner sleeve as described in para. 4.8.7. These cotton inner sleeves are available from your Lympha Press dealer.

5.2 Which compression garment should you use?

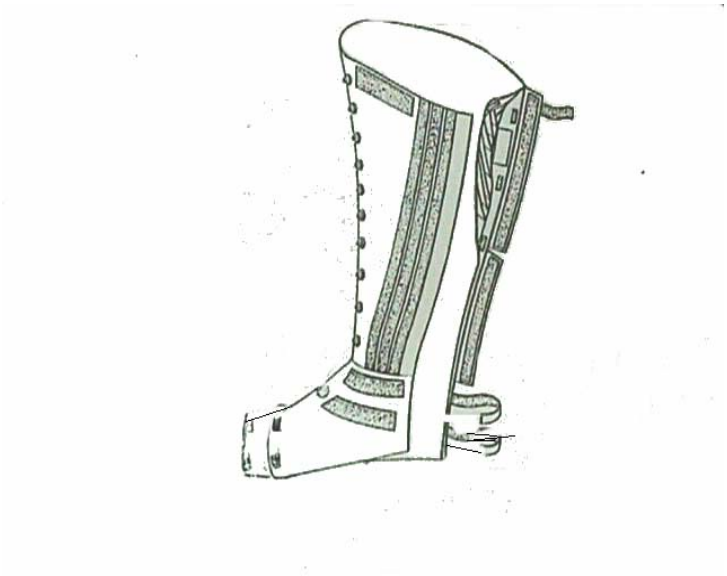
Your local dealer will assist in selecting a compression garment of the appropriate size for optimal treatment results. The tighter the fit, the more effective the treatment. Many different size compression garments are available.

The Zipper sleeves include three zippers for circumferential adjustment.. As the treatment progresses the circumference of the limb changes. At that point, the sleeve can be adjusted by switching to another zipper to improve the fit (See figure 13).

When using Velcro sleeves, fit sleeve tightly, using the appropriate Velcro strap. As the treatment progresses the circumference of the limb changes. At that point, the sleeve should be readjusted (See figure 14).

Figure 13 - Zipper sleeve

Figure 14 - View of Velcro sleeve



5.2.1. Connecting the Air Hoses

For Zipper Sleeves, Velcro Sleeves, Waist Sleeves and Boots:

Attach air hoses to the sleeve by inserting each hose into the appropriate valve. Each hose feeds one pressure compartment. The end fittings of the hoses are numbered. Always begin by inserting hose number 1 into the valve furthest from the body (for the lower limbs, start from the boot).

Continue attaching the hoses to the valves in increasing numerical order. Insert the hose bundle connectors (in direction pointed by red arrows) securely into one of the corresponding air socket receptacles (No matter which one) and secure safety screw.

When disconnecting a hose, always hold it by the fitting and use a simultaneous twisting pulling motion to work it free. If you need to remove sleeve from the device (for cleaning or other purposes) loosen safety screw and pull hose connector from the device. To remove air hose bundle from sleeve, twist and pull fitting at the same time

NOTE:

It is possible to simultaneously operate two sleeves using the additional air outlet located on the Pressure unit. If only one sleeve is used, cap the air outlet not in use with a 12 Pronged Plug supplied with the device.

5.3 Unattached hoses

If the number of hoses is greater than the number of compartments, Cap the unattached hoses. To prevent air from escaping and subsequent loss of pressure, cap any unattached hoses with the Double Female Plugs provided.(Each plug can cap two hoses) See Double Female Plug in Unpacking.

For overlapping pants: Simply insert the two hose bundle connectors (in direction pointed by red arrows), securely into the corresponding air socket receptacles and secure the safety screws. To disconnect, loosen the safety screws and pull the connectors from the device.

6. OPERATING PROCEDURE

6.1 Preparation

A. Place the device on a flat stable surface without a chance of slipping or falling, where it can be easily reached by the patient from their seated or lying position during treatment. Since the air supply is generated from the bottom of the device, do not place the device on a tablecloth or fabric as this might block the free flow of air to the device.

B. Before connecting the electrical cord to the device and to electric outlet, make sure the voltage is suitable.

C. Insert the 12-pin hose connector to the corresponding receptacle in front of the device. Make sure that the red arrow is facing up (The three grooves on the connector are facing down) and secure safety screw.

D. Insert the hose tips into the corresponding receptacles in the compression garment in numerical order, starting from the distal point and advancing toward the proximal point. Plug the unused hose tips, using the plugs provided with the device. Each plug can be used for two hose tips. For overlapping pants, first place the pants on the treatment surface and position the device so that you can reach the device controls easily from the treatment position. Attach the pants hose bundle connectors to the device, and then put on the pants.

E. Fit the compression garment on the treated limb, using the appropriate zipper or Velcro strap after the proper preparation (see para. 5.)

F. If possible, elevate the limb lodged in the sleeve to a horizontal position.

6.2 Main menu options

NOTE:

The device is pre-programmed at the factory as follows:

Pre-Therapy: 40 mmHg, Speed=Normal, Pause time=2 sec.
Lympha: 60 mmHg, Treatment time=30 minutes, Pause time=4 sec.
Ballancer: 40 mmHg, Treatment time=15 minutes, Speed=fast, Pause time=3 sec.
For changing the **Program** to your requirements, please refer to para. 7 Programming the device.
For more details about Cycles and their Parameters, see para. 7.2.2.

The settings you will see below correspond to the pre-programmed settings mentioned above. We are now going to run the device according to these settings.

Turn on the device. A short serial of clicks will be heard, while the system initializes the values, and the note "**Select Option: RUN**" of the **Main Menu** appears on the display.
This is what you will see:

Select Option: RUN

There are 4 options to chose from therefore:
Use the **UP** ▲ and **DOWN** ▼ keys to scroll throughout the options of the Main Menu, as follows:

Main Menu options	Option Description
Select Option: RUN	When this menu option is displayed, pressing the **START/STOP** key will start operation of the Ballancer Professional treatment. For More information on the **START/STOP** Key see 6.7 **START/STOP** Key Functions.
Select Option: Resume Paused	This menu option allows you to resume treatment after a brief pause from the same Step in the program you were at before you stopped. For more details See 6.6.
Select Option: PC-Communicate	Use this menu option to program the device using a PC. For more details See 7.4 Programming via PC communication.
Select Option: Editing	Use this menu option to program the device manually, using the keys on the front of the device. For more details See 7.2 Device Programming.

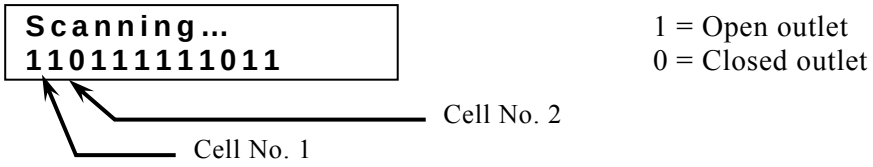
NOTE:

The options "**RUN**" and "**Resume Paused**" are operating modes, and will be described in this section. The options "**PC-Communicate**" and "**Editing**" are programming modes, and will be described in para. 7.

6.3 Running the treatment

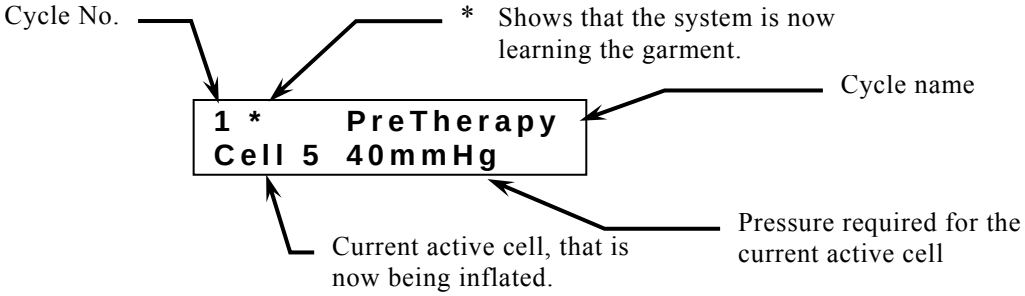
When **"Run"** appears on the screen, pressing the **START/STOP** key will operate the device. The system starts by scanning the connections to the garment, one by one. A closed outlet (using a double female plug will be symbolized by "0", and an open outlet will be symbolized by "1". From the scanning till the end of the treatment, the system will **ignore** all closed outlets.

Press the **START/STOP** button to operate the device.

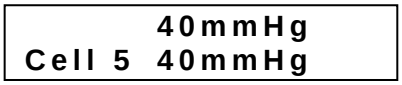


Now the system begins the first **Cycle** in the first **Step** of the **Program**. During the first few running cycles, the system learns the garment volume and the patient's limb, in order to calibrate the exact pressure required for each cell.

Running 1st screen: (for Pre-Therapy cycle)

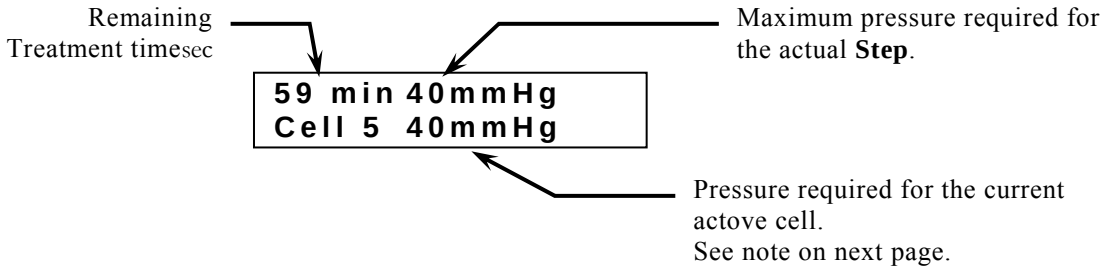

Cycle No.
* Shows that the system is now learning the garment.
Cycle name
1 * PreTherapy
Cell 5 40mmHg
Pressure required for the current active cell
Current active cell, that is now being inflated.

After 5 seconds, the display information will change, showing the 2nd display of **Pre Therapy** cycle:



Except for the **Pre Therapy** Cycle (which operates until the cycle has been completed one time and then stops), in all other cycles the remaining Treatment time will be shown in the 2nd display screen.

Running 2nd display- Regular cycle:


Remaining Treatment timesec
Maximum pressure required for the actual **Step**.
59 min 40mmHg
Cell 5 40mmHg
Pressure required for the current actove cell.
See note on next page.

NOTE:

"Pressure required for the actual **Step**" is the pressure you set during the editing. "Pressure required for the current **active cell"** may be a lower pressure than that which you set, as this is the pressure calculated by the system for the active cell, when a pressure gradient along the sleeve is required. See para. 0.

The 1st display screen and the 2nd display screen continue toggling back and forth every 5 seconds.

When the system finishes learning the garment and the patient's limb, the "*" in the 1st display is changed to ":" and the cycle continues until Treatment Time is over (Treatment Time is set for each Step in the Program separately).

Running 1st display– after learning the garment.

```
1:      PreTherapy
Cell 5  40mmHg
```

The system will continue functioning this way until the Treatment Time for the first Step has elapsed and will continue immediately to the second Step's cycle. Since the new step's cycle has different required parameters, the system needs to check the garment and the patient limb dimensions once again. You will see that on the 1st display there is a symbol "*", until the ascertainment process is complete.

6.4 Changing pressure while the device is operating:

If you feel uncomfortable with the pressure, you can decrease it by pressing the **DOWN** key. The pressure will decrease immediately to the value you see on the display.

In the same way, you can increase the pressure while the device is operating by pressing the **UP** key.

NOTE:

After changing pressure while the device is operating, the system will begin "learning" limb again during the next cycle. This "learning" process generally does not change the "feel" of the treatment.

6.5 Stopping the treatment

When the system reaches the step "End Program" it goes automatically into active deflation meaning that all the extra air will be sucked out of the garment.

If you want to stop the treatment manually before reaching "End Program", then you have to press the **START/STOP** key. In both cases you will see the following screen.

Deflating display:

```
Deflating...
```

The device will stop working, when all extra air has been released, and will return to the **Main Menu** display. If you don't want to wait for the machine to stop automatically you can manually stop the machine by once again pressing the **START/STOP** key.

NOTE:

You can stop the Treatment and get into active deflation by pressing the **START/STOP** key **any time** during the treatment**.** Remember, in case of emergency, or if the patient feels the need to cease the treatment immediately, you can always just shut down the **ON/Off** switch. All valves will open, allowing the air pressure out and deflating all the cells of your garment.

6.6 Resume paused

From the Main Menu select Resume Paused using the **UP** and **DOWN** keys:

Select Option Resume Paused

This menu option allows you to resume treatment after a brief pause from the same **Step** in the program you were at before you stopped. When this option is displayed, press **START/STOP** key to resume treatment. To restart treatment from the beginning, use the **RUN** option..

NOTE:
The Resume Paused option works only after stopping the treatment by pressing the **START/STOP** key. If the main switch or a power failure stopped the treatment, using this option will start the treatment from the beginning.

NOTE:
At the end of treatment, shut down the On/Off switch, and disconnect device's electrical cord from the electrical outlet and from the device.

6.7 TART/STOP key functions

Display Screen	
Select Option RUN	Pressing **START/STOP** key starts treatment from the beginning. See 6.3.
Any Running Screen	Pressing **START/STOP** key stops treatment and begins deflation See 6.5.
Deflating…	Pressing **START/STOP** key stops the device See 6.5.
Resume Paused	Start the treatment from the where you left off. (The step that was working when you manually stopped the device.) See 6.6.

7. PROGRAMMING THE DEVICE

7.1 Programming overview:

The Lympha Press® Plus is planned to give you a full **Treatment.** You can choose from **one to six Steps**.

For each **Step** you should chose one of the **Cycles** that are built-in to the device. The **Step** "End Program" stops the **Treatment**.

For each **Cycle** you should enter the required **Parameters** (i.e. pressure, pause time between cycles, the speed of the cycle and treatment time of the specific cycle.

The **lympha Press Plus** can be programmed in either two ways:

1. **Device Programming** – entering the data by means of the four keys on the panel (see Figure 2 - Control Panel). **UP** and **DOWN** keys are used to scroll up and down through the setting options. The **ENTER/NEXT** button inputs your setting and/or moves on to the next programming step.
2. **PC Programming** – entering the data by means of a special **Editing Program.** This **Editing Program** is given on a CD enclosed. Explanations for setting up the **Editing Program** are enclosed with CD see 7.4.

7.2 Device Programming

Use this mode to program the Lympha Press® Plus manually, using the keys on the front of the device (see Figure 2 - Control Panel).

Programming the **Treatment** consists of choosing **cycles** (i.e. Pre-therapy, Lympha, Wave, etc.) and setting or changing their various **parameters** (i.e. pressure, treatment time, pause time, etc.)

For more information about the different **cycles** and their uses, please refer to para. 3.1 Cycle differences and uses**.**

NOTE:
At any point during the programming, if you are lost, you may return to the **main menu** display by pressing **next / enter** as many times as needed until you reach the "**Select Option: RUN**" display.

NOTE:
We are now going to guide you through the editing of the pre-programmed device. Please note that the order of the display screens shown below relates to the cycles that came with your device.

Enter the **Edit** mode from the **Main Menu**, by scrolling with the **UP** and **DOWN** keys until you reach the EDIT MODE window.

Select Option: Editing

Press the **ENTER/NEXT** key to begin editing the program.

7.2.1. Choosing Steps and Cycles:

Now you are going to choose one of the six Steps to be edited from the program you device comes with. Find the right Step using the **UP** or **DOWN** key.

Select Step: Step1=PreTherapy
Select Step: Step2=Lympha
Select Step: Step3=Ballancer
Select Step: Step4= End Prog.
Select Step: Step5=End Prog.
Select Step: Step6=End Prog.

Note:
Scrolling **UP** and **DOWN** you can see all the Cycles that were pre-programmed for the Steps in your device.

To continue, choose Step 1 and press **ENTER/NEXT** to enter the 1st step:

Select Cycle: Step1=PreTherapy

Now you can use **UP** or **DOWN** key to choose the appropriate **Cycle** for the actual **Step**:

Select Cycle: 1: PreTherapy	Select Cycle: 1: Lympha	Select Cycle: 1: Wave
Select Cycle: 1: Ballancer	Select Cycle: 1: Gradient12	Select Cycle: 1: End Prog.

To continue, please choose **Pre-Therapy** again for the first Step.

Press **ENTER/NEXT:**

[Next] for Edit [UP/Down] to Exit

In order to give you the opportunity to **exit editing** if you don't want to change the parameters of the Cycle you have chosen, you can exit by pressing **UP** or **DOWN,** or continue **Editing** by pressing **ENTER/NEXT** key.

To continue, press **ENTER/NEXT** in order to get into editing the **Parameters** of the Pre-Therapy you have just chosen.

7.2.2. Editing parameters of the cycles

The Parameters of the different cycles are:

Pre-Therapy: Pressure, Pause time between cycles and Speed of the cycle. (See 7.2.2.a.)

Lympha: Pressure, Treatment time of this cycle and Pause time between cycles.(See 7.2.2.b.)

Wave: Pressure, Treatment time of this cycle and Pause time between cycles. (See 7.2.2.c)

Ballancer: Pressure, Treatment time of this cycle and Pause time between cycles and the Speed of the cycle. (See 7.2.2.d.)

Gradient12: Pressure (for each one of the 12 cells separately), Treatment time of this cycle and Pause time between cycles. (See 7.2.2.e.)

End Program: No parameters. When the program contains less then 6 steps, **End Prog**. should be chosen for the next step.

NOTE:
When setting the Pressure Parameters do not use pressure higher than that recommended by your physician. Contact your physician if you have any questions.

7.2.2.a Editing pre-therapy parameters

The path used to get here, from the Main Menu:
Select option - Editing
Select Step – step # (1,2,…6)
Select Cycle – Pre-Therapy
[next] to continue editing.

```
1: Set Pressure
 30 mmHg
```

Notes:
1. Pressure can be set between 20 to 80 mmHg. Holding a key **DOWN** will change the values rapidly.
2. The "1:" on the data line means: You are editing Step No. 1.

Use **UP** or **DOWN** keys to adjust the Pressure required (for our example - set it to 65 mmHg).

```
1: Set Pressure
 65 mmHg
```

Press **ENTER/NEXT** twice to get the **Pause Time** Parameter.
Use **UP** or **DOWN** keys to adjust the time required:

```
1: Pause Time
2 seconds
```

Note:
Time can be set between 2 to 120 seconds.
Holding a key **DOWN** will change the values rapidly.

Adjust the Pause Time to 6 seconds and press **ENTER/NEXT** to get the **Speed** Parameter.
Use **UP** or **DOWN** keys to adjust the speed required:

```
1: Speed
 Normal
```

Note:
The options for Speed parameters are: Normal and Slow.
Holding a key **DOWN** will change the values rapidly.

Adjust the Speed to "Very Fast".
Pressing **ENTER/NEXT** now, gives you the opportunity to continue editing or exit and return to the **Main Menu**.

```
Continue Editing
:  NO
```

Note:
Pressing **ENTER/NEXT** for the default selection "NO" will bring you back to the Main Menu **"Select Option - RUN"**.
Changing the selection to "YES" using **UP** key, will let you continue editing, by bringing you back to "Select Step" = the beginning of the Editing Mode (7.2.1).

Use **UP** to change "No" to "Yes" and press **ENTER/NEXT** in order to continue editing the 2nd Step:

7.2.2.b. Editing Lympha Parameters

The path you used to get here, from the Main Menu:
Select option - Editing
Select Step – step # (1,2,…6)
Select Cycle – Lympha
[next] to continue editing.

Note:
Continuing the editing from previous step, brings you straight to "Select Step: Step 1.".
To continue, use **UP** key to select Step 2 and press **ENTER/NEXT** in order to get to Select Cycle. Then press **ENTER/NEXT** again to get to Select Cycle:- Lympha. Now Press **ENTER/NEXT** a third time to begin editing parameters of the Lympha Cycle.

Use **UP** or **DOWN** keys to adjust the **Pressure** required:

```
2: Set Pressure
 60 mmHg
```

Note:
Pressure for **Lympha** Cycle can be set between 20 to 130 mmHg.
Holding a key **DOWN** will change the values rapidly.
"2:" on the data line means: You are editing Step No.2

Set the pressure to 80 mmHg and Press **ENTER/NEXT** to get the **Treatment Time** Parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
2: Treatment Time
 30 Minutes
```

Note:
Time can be set between 5 to 120 minutes.
Holding a key **DOWN** will change the values rapidly.

Set the Treatment Time to 60 minutes and press **ENTER/NEXT** to get the **Pause Time** parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
2: Pause Time
 4 seconds
```

Note:
Time can be set between 2 to 120 seconds.
Holding a key **DOWN** will change the values rapidly.

Confirm 4 seconds for Pause Time by pressing **ENTER/NEXT**.
At this point you are given the opportunity to continue editing, or exit and return to the Main Menu.

```
Continue Editing
:  NO
```

Note:
Pressing **ENTER/NEXT** for the default selection "**NO**" will bring you back to the Main Menu "**Select Option – RUN**".
Changing the selection to "**YES**" using **UP** key, will let you continue editing, by bringing you back to "**Select Step**" = the beginning of the **Editing Mode** (7.2.1)

Use **UP** to change "**No**" to "**Yes**" and press **ENTER/NEXT** in order to continue and edit the 3rd Step of the example.

7.2.2.c. Editing Ballancer parameters

The path you used to get here, from the Main Menu:
Select option - Editing
Select Step – step # (1,2,…6)
Select Cycle – **Ballancer**
[next] to continue editing.

> **Note:**
> Continuing the editing from previous step, brings you straight to "Select Step: Step 1".
> To continue, use **UP** key to select Step 3 and press **ENTER/NEXT** in order to get to Select Cycle. Then press **ENTER/NEXT** again to get to Select Cycle - Ballancer. Now Press **ENTER/NEXT** a third time to begin editing parameters of the Ballancer Cycle.

Use **UP** or **DOWN** keys to adjust the **Pressure** required:

```
3: Set Pressure
 40 mmHg
```

> **Note:**
> Pressure for **Ballancer** cycle can be set between 20 to 80 mmHg.
> Holding a key **DOWN** will change the values rapidly.

Set pressure to 45 minutes and press **ENTER/NEXT** to get the **Treatment Time** Parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
3: Treatment Time
 10 Minutes
```

> **Note:**
> Time can be set between 5 to 120 minutes.
> Holding a key **DOWN** will change the values rapidly.

Set Treatment Time to 20 minutes and press **ENTER/NEXT** to get the **Pause Time** Parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
3: Pause Time
 3 seconds
```

> **Note:**
> Time can be set between 2 to 120 seconds.
> Holding a key **DOWN** will change the values rapidly.

Set the Pause Time to 10 seconds and press **ENTER/NEXT** to get the **Speed** Parameter:
Use **UP** or **DOWN** keys to adjust the speed required:

```
3: Speed
Normal
```

> **Note:**
> The options for the Speed parameter are:
> Fast, Normal, Slow.
> Holding a key **DOWN** will change the values rapidly.

Change the **Speed** to "Normal".
Pressing **ENTER/NEXT** now, gives you the opportunity to continue editing or exit and return to the **Main Menu**.

```
Continue Editing
:  NO
```

> **Note:**
> Pressing **ENTER/NEXT** for the default selection "**NO**" will bring you back to the Main Menu "**Select Option – RUN**".
> Changing the selection to "**YES**" using **UP** key, will let you continue editing, by bringing you back to "**Select Step**" = the beginning of the Editing Mode 7.2.1)

Use **UP** to change "**No**" to "**Yes**" and press **ENTER/NEXT** in order to continue and edit the 4th Step.

7.2.2.d. Editing Wave parameters

The path you used to get here, from the Main Menu:
Select option - Editing
Select Step – step # (1,2,…6)
Select Cycle – **Wave**
[next] to continue editing.

```
Select Cycle:
4: End Prog.
```

Note:
Continue editing from previous step, brings you straight to "**Select Step: Step 1**".
To continue, use **UP** key to select Step 4 and press **ENTER/NEXT** in order to get Select Cycle – End Prog.

Use **UP** or **DOWN** to change the **End Program**, that was chosen for Step #4 to **Wave**.

```
Select Cycle:
4: Wave
```

Press **ENTER/NEXT** twice in order to get into the **Wave** Parameters:
Use **UP** or **DOWN** keys to adjust the **Pressure** required:

```
4: Set Pressure
 20 mmHg
```

Note:
Pressure for **Wave** cycle can be set between 20 to 130 mmHg. Holding a key **DOWN** will change the values rapidly.

Adjust the pressure to 75 mmHg and press **ENTER/NEXT** to get the **Treatment Time** Parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
4: Treatment Time
 20 Minutes
```

Note:
Time can be set between 3 to 120 minutes.
Holding a key **DOWN** will change the values rapidly.

Change the Treatment Time to 40 minutes and press **ENTER/NEXT** to get the **Pause Time** Parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
4: Pause Time
 20 seconds
```

Note:
Time can be set between 4 to 120 seconds.
Holding a key **DOWN** will change the values rapidly.

Set Pause Time to 7 seconds. Pressing **ENTER/NEXT** now, gives you the opportunity to continue editing or exit and return to the **Main Menu**.

```
Continue Editing
: NO
```

Note:
Pressing **ENTER/NEXT** for the default selection "**NO**" will bring you back to the Main Menu "**Select Option – RUN**".
Changing the selection to "**YES**" using **UP** key, will let you continue editing, by bringing you back to "**Select Step**" = the beginning of the Editing Mode (7.2.1).

Press **ENTER/NEXT** in order to exit programming. You now can press **START/STOP** to operate the device according to your new parameters.

7.2.2.e. Editing Gradient12 parameters

The path used to get here, from the Main Menu:
Select option - Editing
Select Step – step # (1,2,…6)
Select Cycle – Medicare
[next] to continue editing.

Notes:
Gradient12 is similar to **Lympha** cycle, but applies downward gradient pressure between every two cells, which must be set separately. The system will not allow you to adjust a reverse gradient (i.e. higher pressure for the next cell).

For the following example, let's say you have chosen Step No. 1 for **Gradient12** Cycle:
Use **UP** or **DOWN** keys to adjust the Pressure required for cell No. 1:

```
1: Pressure 1
 31 mmHg
```

Note:
The **maximum** Pressure in the garment (in cell No. 1) for **Gradient12** Cycle can be set between 31 to 130 mmHg. Holding a key **DOWN** will change the values rapidly.

Set Pressure 1 to 60 mmHg. Press **ENTER/NEXT** to get the **Pressure** Parameter for cell No. 2:
Use **UP** or **DOWN** keys to adjust the time required for cell No. 2:

```
1: Pressure 2
 30 mmHg
```

Note:
Pressure for cell No. 2 can be set between 30mmHg, up to the value which you set for cell No. 1, minus 1mmHg.(For this example up to 59)
Holding a key **DOWN** will change the values rapidly.

Adjust Pressure 2 to 55 mmHg and press **ENTER/NEXT.** You will need to repeat this action, until you have entered pressure values to all 12 cells. **Then,**
Press **ENTER/NEXT** to get the **Treatment Time** Parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
1: Treatment Time
 20 Minutes
```

Note:
Time can be set between 5 to 120 minutes.
Holding a key **DOWN** will change the values rapidly.

Change the Treatment time to 40 minutes and press **ENTER/NEXT** to get the **Pause Time** Parameter:
Use **UP** or **DOWN** keys to adjust the time required:

```
1: Pause Time
 20 seconds
```

Note:
Time can be set between 4 to 120 seconds.
Holding a key **DOWN** will change the values rapidly.

Set **Pause Time** to 10 seconds.

Pressing **ENTER/NEXT** now, gives you the opportunity to continue editing or exit and return to the **Main Menu**.

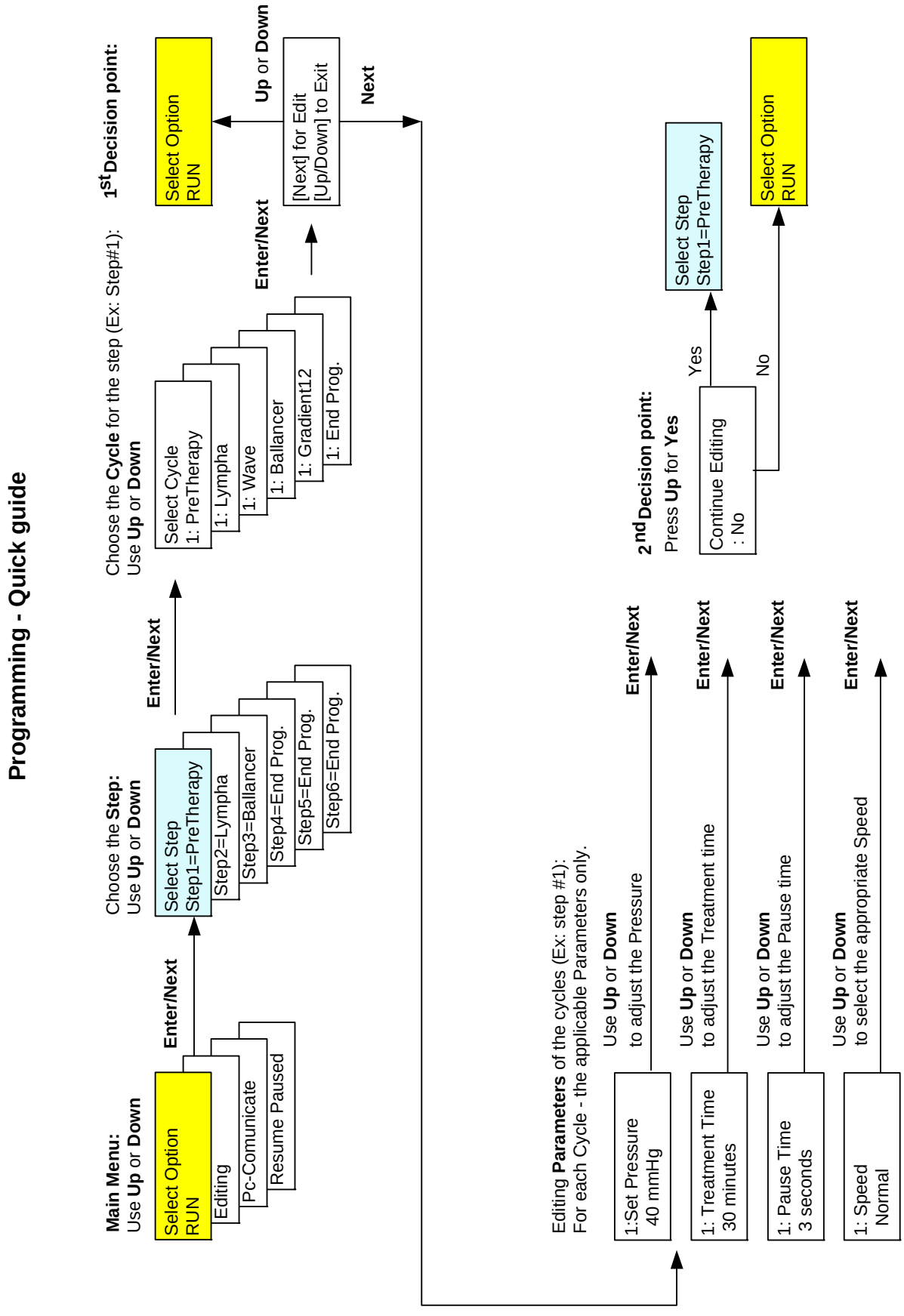
Continue Editing : NO

Note:
Pressing **ENTER/NEXT** for the default selection "**NO**" will bring you back to the Main Menu "**Select Option – RUN**".
Changing the selection to "**YES**" using **UP** key, will let you continue editing, by bringing you back to "**Select Step**" = the beginning of the **Editing Mode** (7.2.1).

Press **ENTER/NEXT** in order to exit programming.
You now can press **START/STOP** to operate the device to Gradient12 cycle.

NOTE:
If your **Treatment** contains less then 6 cycles, please make sure that the last cycle is "End Prog."
If you need more than 120 minutes of treatment for any particular cycle, choose this cycle for two (or more) consecutive step, setting the first cycle at 120 minutes and setting the subsequent cycle(s) to add additional time as needed (up to 120 minutes per additional cycle).

7.3 Quick Programming Guide



7.4 Programming via PC communication

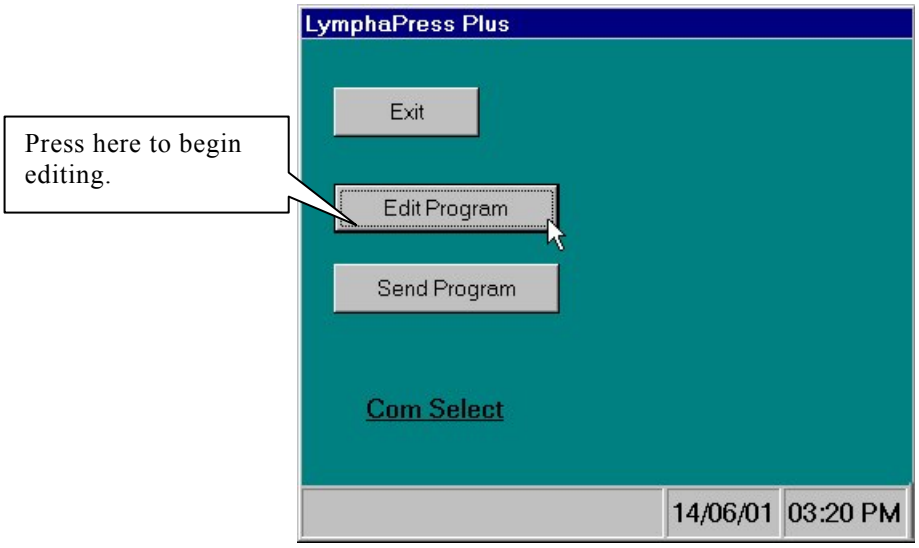
Programming the Ballancer Professional® from a PC gives the user the following benefits:

- The programming is much faster and convenient.
- Changing parameters (other than pressure, which can be changed while the device is operating) can be done very easily by using the Resume Paused feature.

Before you start Programming via PC, please make sure communication cable is connected properly to both the device (see Figure 4 - Power cord and pc communication cord) and the PC COM outlet.

When entering the PC-Editing Program the following screen appears:

Figure 15 - First screen in pc editing option



When you choose a Cycle from the list, the appropriate window of parameters will appear

Figure 16 - Pre Therapy window

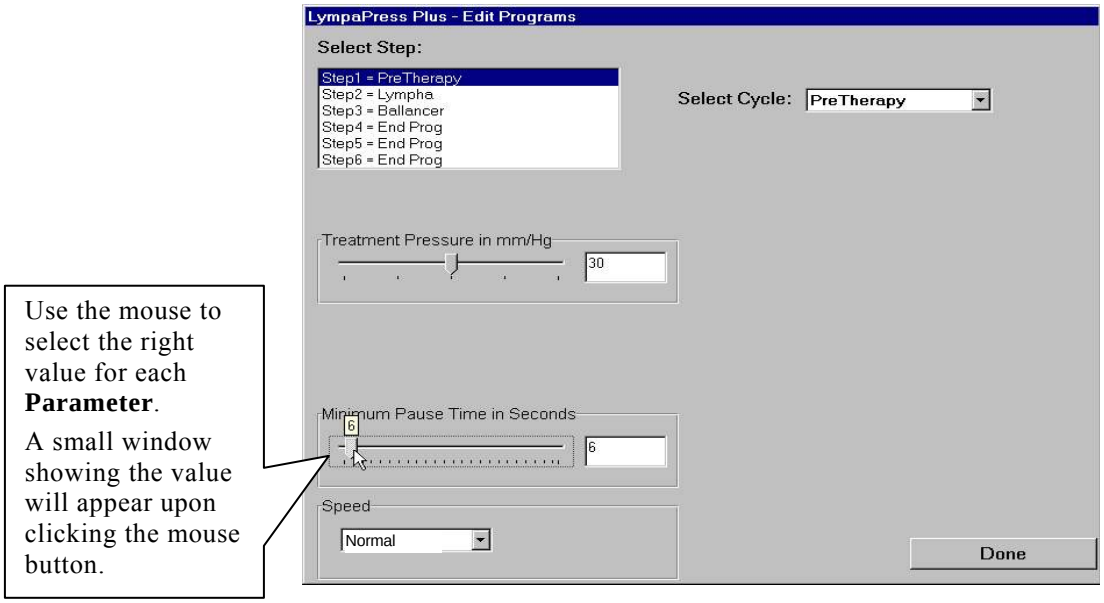
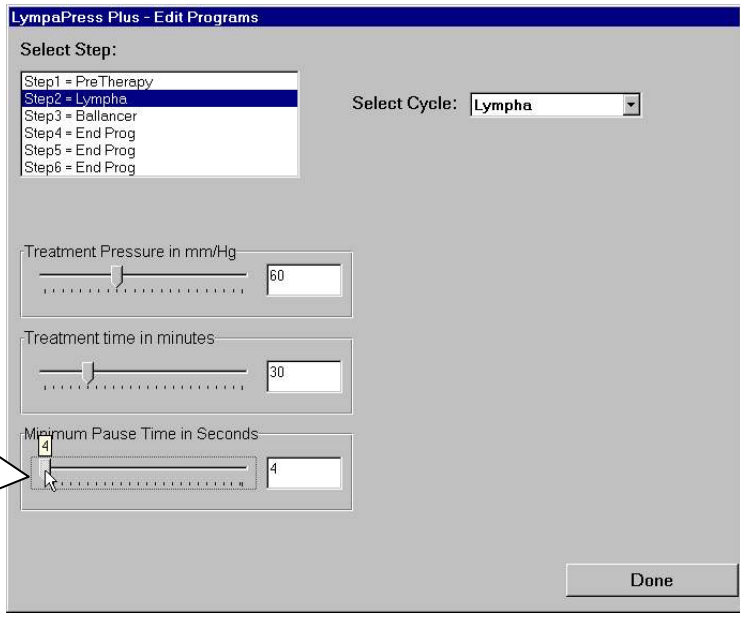


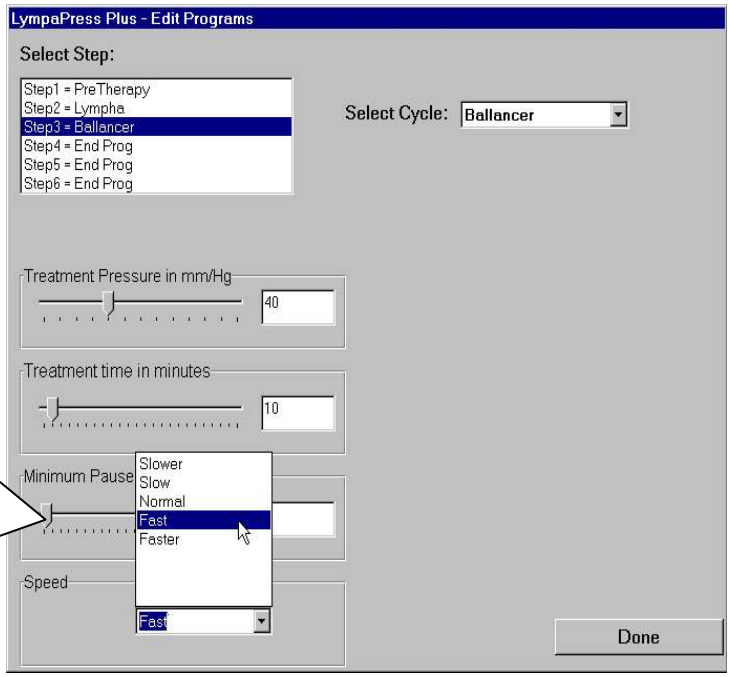
Figure 17 - Lympha window



Use the mouse to select the right value for each **Parameter**.

A small window showing the value will appear upon clicking the mouse button.

Figure 18 - Ballancer window



Use the mouse to select the right value for each **Parameter**.

A small window showing the value will appear upon clicking the mouse button.

Figure 19 - Wave window

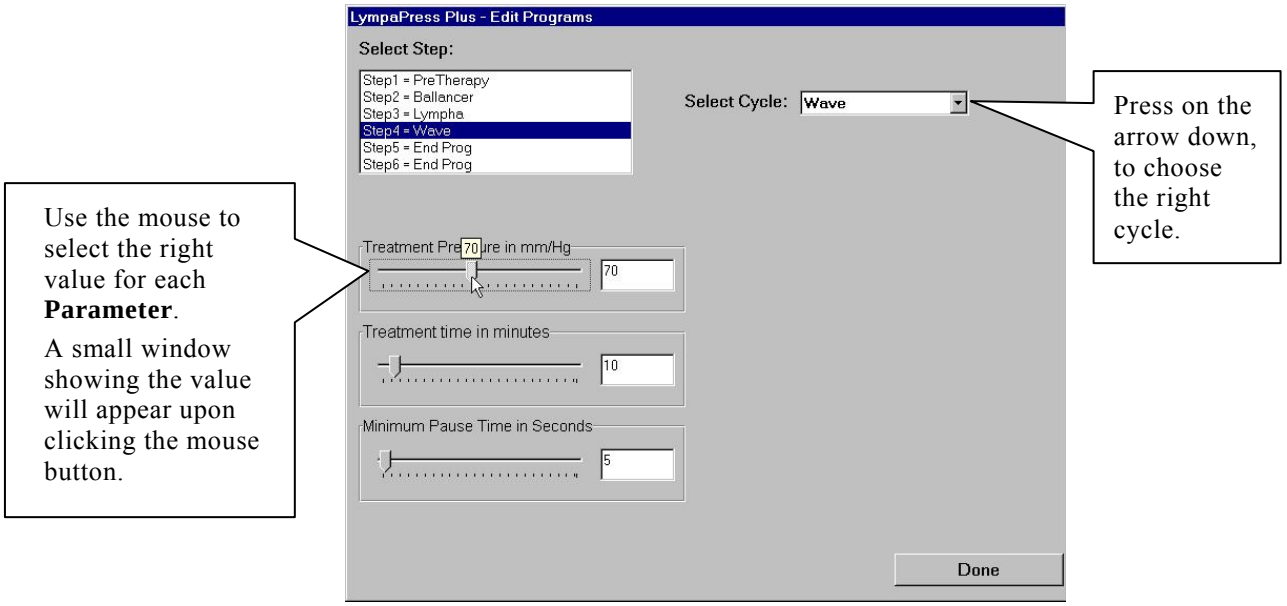
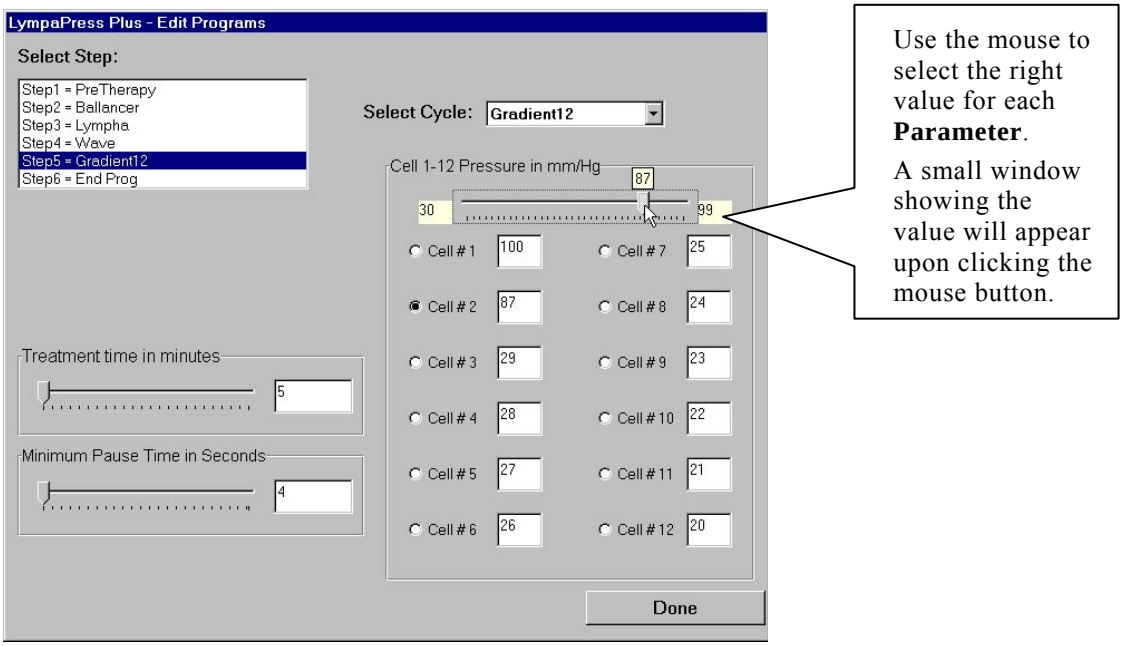
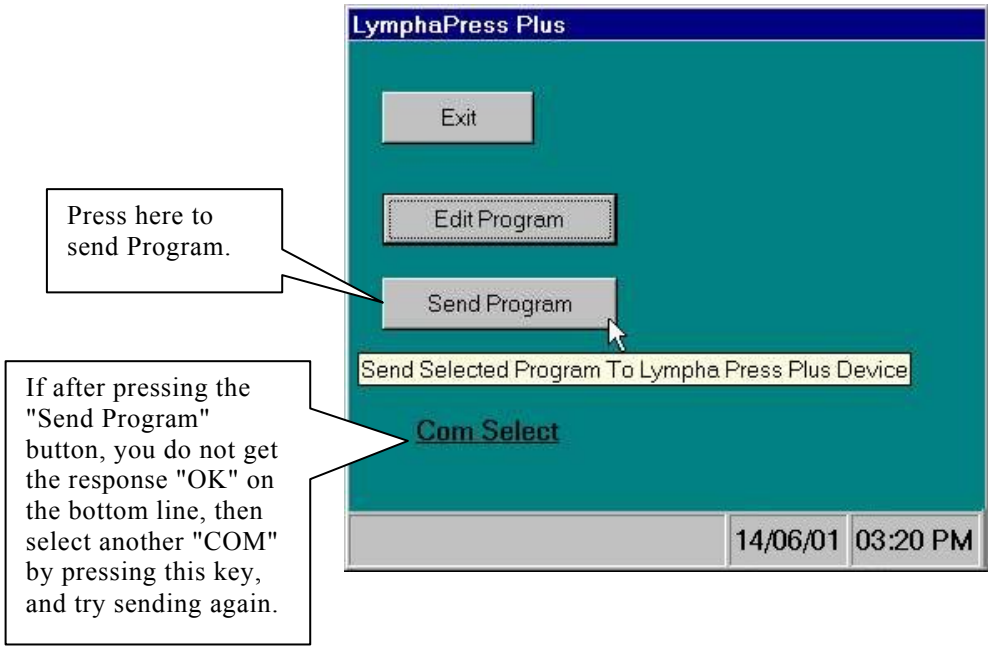

LympaPress Plus - Edit Programs
Select Step:
Step1 = PreTherapy
Step2 = Ballancer
Step3 = Lympha
Step4 = Wave
Step5 = End Prog
Step6 = End Prog
Select Cycle: Wave
Press on the arrow down, to choose the right cycle.
Use the mouse to select the right value for each Parameter.
A small window showing the value will appear upon clicking the mouse button.
Treatment Pressure in mm/Hg
70
Treatment time in minutes
10
Minimum Pause Time in Seconds
5
Done

Figure 20 - Gradient12 window



NOTE:
When you have finished editing all the cycles, press **Done** to get the display screen seen below.

Figure 21 - Sending the program


LymphaPress Plus
Exit
Edit Program
Send Program
Send Selected Program To Lympha Press Plus Device
Com Select
14/06/01
03:20 PM
Press here to send Program.
If after pressing the "Send Program" button, you do not get the response "OK" on the bottom line, then select another "COM" by pressing this key, and try sending again.

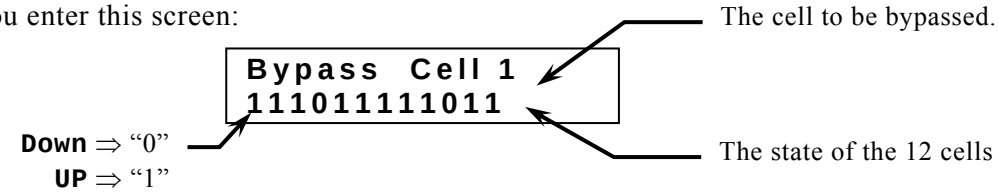
8. EXTRA APPLICATIONS

8.1 Cell bypass

In case you wish the system to **skip** one cell or more (due to localized discomfort, etc.), use the Cell Bypass option. The bypassed cell will then not inflate during treatment.

To enter the menu – hold down both **DOWN** and **ENTER/NEXT** together for 5 seconds (This application cannot be edited by the PC-program)

You enter this screen:



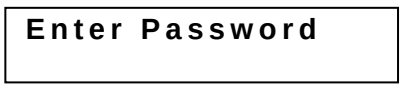
"0" means the cell will be bypassed.
"1" means the cell will operate

Use **ENTER/NEXT** to move from one cell to another and to bring you back to the Main Menu.

8.2 Technician parameters

To enter the menu – hold down both **UP** and **ENTER/NEXT** for 5 seconds.

You enter this screen:



After entering the password, **technician parameters** can be changed.

For more details please refer to Maintenance Manual.

List of technician parameters:

- Minimum time for filling a cell.
- Maximum time for filling a cell.
- Calibrating air sensors.
- Vacuum A/D value.
- Emergency maximum pressure
- Gradient pressure along the garment.
- Pause between Steps.
- Scanning pressure.
- Total operating time counter.

9. MAINTENANCE

9.1 Cleaning the device

The device may be cleaned externally only with a damp cloth. Make sure the electric cord is disconnected

WARNING:

Only an authorized technician should open the device!

9.2 Cleaning the garment

Gently wipe the compression garment using a soft cloth and warm water with mild detergent, not exceeding 40°C (100°F).

Wipe dry using a soft towel only. When dry, the garment may be wiped over with antiseptic lotion or cream.

WARNING:

DO NOT - Autoclave - Dry clean - Hand or power wring - iron-Tumble or force heat dry. Do not use bleach!

WARNING:

Should the outer envelope of the sleeve require washing contact your local distributor for instructions.

9.3 Sterilization

Use gas sterilization not exceeding 40°C (100°F)

9.4 Storage

A. Store in a dry, shaded place.

B. Store the hoses in a dry shaded place, keep the hoses untwisted and do not fold them.

WARNING:

Since the garment is inflated by compressed air it must remain airtight. Therefore, avoid contact with pins, needles and other sharp objects.

10. TROUBLE SHOOTING

Phenomena	Problem source	Fixing
Error message: "ChkSum Err."	Software problem	Call the technician
Error message: "Pneum. Fault !!"	Air Leakage.	Check garment and hose bundle connections for mechanical damage and replace if necessary. Shut down and turn on again after fixing.
Error message: "Pressure Fault !!"	1. A problem with accessory	Check your accessories for "blocked" air passage (i.e. folded hose or cell). Shut down and turn on again after fixing.
	2. Hardware problem	Call the technician
Error message: "Memory Fault !!"	Software problem	Call the technician
Error message: "Init. Ser Memory"	Software problem	Call the technician
On / Off switch doesn't illuminate.	No electric supply.	Check fuses, power cord and electric outlet. Make sure the outlet voltage meets the data written on the label.
On / Off switch illuminates, but the display does not.	Problem with display's connections or adjustment	Call the technician
No response when a button is pressed.	Problem with button connections.	Call the technician
Loud & abnormal noise.	Internal hardware problem.	Call the technician
Safety valve horn sounds	Internal hardware problem.	Shut down and turn on the device again, in order to reset the system. If the problem continues, call the technician.

11. MANUFACTURED BY

Mego Afek AC Ltd.
Kibbutz Afek 30042
Israel

11.1 Warranty

a) Mego Afek AC Ltd. warrants that the **Lympha press® Plus** Device and garments are free of defects in materials and workmanship.

b) This warranty will remain in effect for 24 months for the device and for 12 months for the garments from date of purchase. During this period, the device and garments, if properly handled and maintained, will be replaced or repaired free of charge.

c) Please bring the faulty device to your dealer for replacement or repair.

d) Warranty does not cover malfunction caused by unreasonable use, non-compliance with usage and maintenance instructions, or damage caused by repair work done by unauthorized personnel.

11.2 MDD Authorized Representative in Europe

Rolf Davidsen Helseagenturer A/s
Postboks 238,
Vestiieimvegen 35, Bygnes, 4250 Kopervik
Norway
Tel: +47-52-844500 Fax: +47-52-844509

11.3 Authorized Importer in Canada

Mrs. Mary Bellini
Global Medical Imports Ltd.
R.R #1 Route 1 #3827
Beaver River, Nova Scotia., B0W 2Y0 Canada
Tel: + 1-902-649-2770 Fax: + 1-902-649-2565

11.4 Authorized Importer and Distributor in USA

Lympha Press USA, Ltd.
232 Park Avenue
Manalapan NJ 07726
Tel.: 1-888-596-7421
Fax: 1-732-792-9745